

TREATY ON INTERNATIONAL COOPERATION IN THE AREA OF PATENTS

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT ON PATENTABILITY

(Chapter II of the Treaty on International Cooperation in the Area of Patents)

Applicant's or Agent's File Ref. 42 284. %nb	FOR FURTHER ACTION	See Form PCT/IPEA/416
International Application No. PCT/EP2004/012129	International Filing Date <i>(Month/Day/Year)</i> October 27, 2004	Priority Date <i>(Month/Day/Year)</i> December 1, 2003
International Patent Classification (IPC) or National Classification and IPC B21C47/34, B21B39/00, B21C47/00		
Applicant SMS DEMAG AG et al.		

<p>1. This international preliminary examination report has been prepared by the duly commissioned International Preliminary Examining Authority according to Article 35 and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 pages, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES; these comprise</p> <p style="margin-left: 20px;">a. <input checked="" type="checkbox"/> <i>(sent to the applicant and the International Office)</i> a total of 5 pages; these are</p> <p style="margin-left: 40px;"><input type="checkbox"/> pages of the description, claims, and/or drawings which have been amended and are the basis for this report and/or pages containing rectifications that have been approved by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> pages which replace earlier pages but which, for the reasons given in field No. 1, item 4, and in the supplementary field, in the opinion of this Authority, contain a change that goes beyond the disclosed contents of the international application in the version originally submitted.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> <i>(sent only to the International Office)</i>: (please specify the type and number of the electronic data carrier(s)), which contain a sequence listing and/or accompanying tables, only in computer-readable form, as specified in the supplementary field regarding the sequence listing (see Section 802 of the Administrative Instructions)</p> <p>4. This report contains indications relating to the following items:</p> <table style="width: 100%; margin-left: 20px;"> <tr> <td><input checked="" type="checkbox"/> Field No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/> Field No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/> Field No. III</td> <td>Nonestablishment of opinion with respect to novelty, inventive activity, and commercial viability.</td> </tr> <tr> <td><input type="checkbox"/> Field No. IV</td> <td>Lack of unity of the invention</td> </tr> <tr> <td><input checked="" type="checkbox"/> Field No. V</td> <td>Substantiated determination under Article 35(2) with respect to novelty, inventive activity, and commercial viability; documents and declarations in support of this determination</td> </tr> <tr> <td><input type="checkbox"/> Field No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/> Field No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/> Field No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	<input checked="" type="checkbox"/> Field No. I	Basis of the report	<input type="checkbox"/> Field No. II	Priority	<input type="checkbox"/> Field No. III	Nonestablishment of opinion with respect to novelty, inventive activity, and commercial viability.	<input type="checkbox"/> Field No. IV	Lack of unity of the invention	<input checked="" type="checkbox"/> Field No. V	Substantiated determination under Article 35(2) with respect to novelty, inventive activity, and commercial viability; documents and declarations in support of this determination	<input type="checkbox"/> Field No. VI	Certain documents cited	<input type="checkbox"/> Field No. VII	Certain defects in the international application	<input type="checkbox"/> Field No. VIII	Certain observations on the international application
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<input type="checkbox"/> Field No. VIII	Certain observations on the international application															

Date of submission of the petition: June 20, 2005	Date of completion of this report: December 23, 2005
Name and mailing address of the office assigned to perform the preliminary examination: European Patent Office D-80298 Munich Tel: +49 89 2399-0 Tx: 523656 epmu d Fax: +49 89 2399-4465	Authorized Officer: Ritter, F. Tel: +49 89 2399-2387

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT ON
PATENTABILITY**

International File No.: **PCT/EP2004/012129**

Field No. I Basis of the Report

1. With respect to the **language**, the report is based on the international application in the language in which it was submitted unless otherwise indicated under this item.
 - ☐ The report is based on a translation from the original language into the following language, which is the language of the translation, which was submitted for the following purpose:
 - ☐ international search (under Rules 12.3 and 23.1 b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rule 55.2 and/or Rule 55.3)
2. With regard to the **constituent parts*** of the international application, the report is based on *(replacement pages which were submitted to the application office in compliance with a request according to Article 14 are considered "originally filed" in the context of this report and are not attached to the report)*:

Specification, pages:

2, 3	as originally filed
1, 1a	received on October 21, 2005 by fax

Claims, Nos.:

1-11	received on October 21, 2005 by fax
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Drawings, Pages:

1/1	as originally filed
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- ☐ a sequence listing and/or any accompanying tables – see supplementary field regarding the sequence listing.

3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description: pages
 - ☐ the claims: Nos.
 - ☐ the drawings: sheets/figures:
 - ☐ the sequence listing (*exact details*):
 - ☐ any tables accompanying the sequence listing (*exact details*):
4. ☐ This report has been prepared as if (some of) the amendments attached to this report and listed

below had not been made, since for the reasons specified in the supplementary field they are considered by this Authority to go beyond the disclosure as originally filed (Rule 70.2 c)).

- ☐ the description: pages
- ☐ the claims: Nos.
- ☐ the drawings: sheets/figures:
- ☐ the sequence listing (*exact details*):
- ☐ any tables accompanying the sequence listing (*exact details*):

* If Item 4 applies, some or all of these pages can be furnished with the comment "replaced."

Field No. V Substantiated determination under Article 35(2) with respect to novelty, inventive activity, and commercial viability; documents and declarations in support of this determination

1. Determination

Novelty (N)	Yes:	Claims 1-11
	No:	Claims
Inventive Activity (AI):	Yes:	Claims 1-11
	No:	Claims
Commercial Viability (CV):	Yes:	Claims 1-11
	No:	Claims

2. Documents and Declarations (Rule 70.7):

See attached page.

**INTERNATIONAL PRELIMINARY
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10/581479
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Re Item V.

1. The following documents are cited in the present office action:

D1: PATENT ABSTRACTS OF JAPAN, Vol. 014, No. 052 (M-0928), January 30, 1990
(1990-01-30) -&; JP 01 278906 A (NIPPON STEEL CORP; others: 01), November 9, 1989
(1989-11-09)

D3: JP 55-068161 A

D4: WO 02/103066 A

2. INDEPENDENT CLAIM 1

The object of Claim 1 is a reel driver for rolling mills with an upper and a lower driving roll. A reel driver of this type is widely known and is disclosed, for example, in Figure 5 in D1.

The object of Claim 1 differs from this in that both driving rolls are provided with a cast jacket, which, in the case of the lower driving roll, is mounted on a steel roll shaft by adhesive bonding and/or shrink fitting and, in the case of the upper driving roll, is held between two clamping elements arranged on a shaft.

By designing the upper driving roll as a hollow roll, this roll can be made larger without a significant weight increase, which would be unfavorable for the operation. By virtue of the fact that the lower driving roll is made of steel, it has especially good supporting properties.

Although D1 discloses the mounting of cast jackets on solid roll shafts, these solid shafts are made of cast materials and not of steel. D1 does not disclose the clamping of individual cast jackets.

The documents D3 and D4 also fail to suggest the object of Claim 1, since D3 discloses only the general teaching of shrink fitting a jacket onto a roll barrel but does not disclose the shrink fitting of a complete cast jacket, and D4 discloses a clamping connection between a jacket and a shaft in a roller of a roller table, which is a totally different type of roll that cannot be compared with a driving roll.

Therefore, the object of independent Claim 1 is novel and inventive (Articles 33(2) and 33(3) PCT).

3. Dependent Claims 2 to 11:

Dependent Claims 2 to 11 disclose refinements of the reel driver in accordance with Claim 1. Accordingly, the objects of these claims are also novel and inventive (Articles 33(2) and 33(3) PCT).